

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-7. (Canceled)

8. (Currently Amended) A method of determining amount of prostaglandin in a plasma sample comprising:

(1) providing a plasma sample from the patient ~~[[on]]~~ in contact with a surface coated with an anti-immunoglobulin antibody;

(2) incubating the plasma sample with an effective amount of an anti-6-keto-prostaglandin $F_{1\alpha}$ (6-keto-PGF $_{1\alpha}$) antibody wherein the anti-immunoglobulin antibody binds to the anti-6-keto-PGF $_{1\alpha}$ -antibody; and a conjugate comprising 6-keto-PGF $_{1\alpha}$ covalently bound to an aequorin mutant;

wherein said aequorin mutant comprises serine substitutions for all three cysteine residues as present in wild-type aequorin (Cys \rightarrow Ser), wherein said aequorin mutant further comprises a single cysteine residue substituted at amino acid position 69 (Ala69 \rightarrow Cys), 70 (Gly70 \rightarrow Cys), 74 (Gly74 \rightarrow Cys) or 76 (Glu76 \rightarrow Cys), and

wherein the 6-keto-PGF $_{1\alpha}$ is coupled to the aequorin mutant via reaction with the sulfhydryl group of the single cysteine,

(3) removing any unbound anti-6-keto-PGF $_{1\alpha}$ -antibody and said conjugate following incubation; and

(4) measuring light intensity of the 6-keto- PGF $_{1\alpha}$ conjugate bound to the anti-immunoglobulin antibody; and

(5) correlating the light intensity of the bound 6-keto- PGF $_{1\alpha}$ conjugate with the amount of prostaglandin in the plasma sample.

9. (Canceled).

10. (Canceled).

11. (Previously Presented) The method of claim 8 wherein the plasma sample is obtained from a patient receiving intravenous prostaglandin therapy.

12. (Currently Amended) The method of claim 8 wherein concentration of said conjugate ~~in the assay~~ is about 1×10^{-10} M.

13-21. (Canceled)

22. (Previously Presented) A kit for measuring prostacyclin in plasma comprising:

- (1) an anti-6-keto-prostaglandin $F_{1\alpha}$ (6-keto-PGF $_{1\alpha}$) antibody;
- (2) an anti-immunoglobulin antibody that binds to the anti-6-keto-PGF $_{1\alpha}$ -antibody; and
- (3) a conjugate comprising 6-keto-PGF $_{1\alpha}$ covalently bound to an aequorin mutant;

wherein said aequorin mutant comprises serine substitutions for all three cysteine residues as present in wild-type aequorin (Cys \rightarrow Ser), wherein said aequorin mutant further comprises a single cysteine residue substituted at amino acid position 69 (Ala69 \rightarrow Cys), 70 (Gly70 \rightarrow Cys), 74 (Gly74 \rightarrow Cys) or 76 (Glu76 \rightarrow Cys), and wherein the 6-keto-PGF $_{1\alpha}$ is coupled to the aequorin mutant via reaction with the sulfhydryl group of the single cysteine.